

AMENDMENT

In the Claims:

Please amend the claims as follows:

1. (Currently Amended) A voltage-controlled tunable filter including:

an input;

an output;

a plurality of resonators serially coupled to each other and to the input and the output,

wherein each of the resonators comprises a microstrip line;

a plurality of tunable capacitors, each of the tunable capacitors being coupled to one of the resonators;

~~said tunable capacitors comprising, a first electrode; a tunable dielectric film positioned on the first electrode; and a second electrode positioned on a surface of the tunable dielectric film opposite the first electrode; and~~

~~means for coupling non-adjacent ones of the resonators.~~

an additional microstrip line and additional tunable capacitor connected in series with the additional microstrip line, said microstrip line having first and second ends, each capacitively coupled to one of the resonator microstrip lines.

2. (Original) A voltage-controlled tunable filter according to claim 1,

wherein each of the resonators includes one of:

a microstrip, a stripline, a coaxial line, a dielectric resonator, or a waveguide.

3. (Original) A voltage-controlled tunable filter according to claim 1, wherein the means for coupling non-adjacent ones of the resonators comprises a series connection of an additional tunable capacitor and a conductor.

4. (Original) A voltage-controlled tunable filter according to claim 1, wherein the plurality of resonators are mounted on a substrate.

5. Canceled

6. (Previously Amended) A voltage-controlled tunable filter according to claim 1, wherein the tunable dielectric film comprises:

barium strontium titanate or a composite of barium strontium titanate.

7. (Original) A voltage-controlled tunable filter according to claim 1, wherein each of the tunable capacitors comprises:

a substrate;

a tunable dielectric film positioned on the substrate; and

first and second electrodes positioned on a surface of the tunable dielectric film opposite the substrate, the first and second electrodes being separated to form a gap.

8. Canceled

9. Canceled

10. Canceled

11. Canceled

12. (Previously Amended) A voltage-controlled tunable filter according to claim 1, wherein the input includes a first microstrip line having an end capacitively coupled to a first one of the resonators; and wherein the output includes a second microstrip line having an end capacitively coupled to a second one of the resonators.

13. Cancel claim 13.

14. (Currrently Amended) A voltage-controlled tunable filter according to claim 13, wherein the microstrip lines are positioned parallel to each other on a substrate.

15. Cancel claims 15.

16. Cancel claim 16.

17. (Original) A voltage-controlled tunable filter according to claim 1, wherein each of the tunable capacitors comprises a tunable dielectric capacitor including a layer of voltage

tunable dielectric material.

18. (Currently Amended) A voltage-controlled tunable filter including:

an input;

an output;

a plurality of resonators serially coupled to each other and to the input and the output;

a plurality of tunable capacitors, each of the tunable capacitors being coupled to one of the resonators;

said tunable capacitors comprising, a first electrode; a tunable dielectric film positioned on the first electrode; and a second electrode positioned on a surface of the tunable dielectric film opposite the first electrode. ~~A voltage-controlled tunable filter according to claim 1,~~ wherein the tunable dielectric film comprises a material selected from the group of:

$\text{Ba}_x\text{Sr}_{1-x}\text{TiO}_3$, $\text{Ba}_x\text{Ca}_{1-x}\text{TiO}_3$, $\text{Pb}_x\text{Zr}_{1-x}\text{TiO}_3$, $\text{Pb}_x\text{Zr}_{1-x}\text{SrTiO}_3$, $\text{KTa}_x\text{Nb}_{1-x}\text{O}_3$, lead lanthanum zirconium titanate, PbTiO_3 , BaCaZrTiO_3 , NaNO_3 , KNbO_3 , LiNbO_3 , LiTaO_3 , PbNb_2O_6 , PbTa_2O_6 , $\text{KSr}(\text{NbO}_3)$ and $\text{NaBa}_2(\text{NbO}_3)_5\text{KH}_2\text{PO}_4$, and compositions thereof and wherein the tunable dielectric film further comprises a non-tunable component; and

means for coupling non-adjacent ones of the resonators.

19. Cancel claim 19.